

Claims:

1. Fission reactor for a Claus plant, comprising a boiler (9) lined with refractory material, which comprises a combustion chamber (2) having an inflow opening (12) for a mixture of heating gas, air and acid gas containing H₂S, a catalyst chamber (10) having a catalyst bed (3), and a chamber (11) on the outflow side, having a gas outlet (13) for hot process gas containing elemental sulfur, characterized in that the boiler (9) is configured as a horizontal cylindrical boiler, in which the combustion chamber (2), the catalyst chamber (10), and the chamber (11) on the outflow side are disposed next to one another, and that the catalyst chamber (10) is delimited, on both sides, in the flow direction, by gas-permeable checker bricks (14), and has a fill opening (15) for introducing the catalyst bed (3), on the mantle side.
2. Fission reactor as recited in claim 1, characterized in that the inflow opening (12) and the gas outlet (13) are disposed on opposite faces of the boiler (9).
3. Fission reactor as recited in claim 1 or 2, characterized in that the checker bricks (14) contain elongated holes.

4. Fission reactor as recited in one of claims 1 to 2, characterized in that on the circumference of the chamber (11) on the outflow side, a branch line (16) lined with refractory material is connected, which opens into a process gas line (17) adjacent to the boiler (9), that in the opening region of the branch line (16), a valve body (18) is disposed in adjustable manner, with which the amount flow of a hot gas stream that exits from the branch line (16) can be regulated, and that a cooler process gas passes through the process gas line (17), which cools the valve body (18) and a setting device (19) assigned to the valve body.

5. Fission reactor as recited in claim 4, characterized in that a waste heat boiler (4) is connected with the gas outlet (13), in which the hot process gas that exits from the boiler (9) is cooled for the condensation of elemental sulfur, and steam is generated, and that the branch line (16) opens into a process gas line (17) that is connected with the waste heat boiler (4) and passes the cooled process gas to a catalyst stage (5) of the Claus plant.